Remarks

The Office Action and prior art have been reviewed with care in preparing for this amendment and response. Applicants appreciate the attention of the Examiner to the application.

Applicants enclose a Supplemental IDS to report the citation of German reference No. DE 23 53 577 C2 during prosecution before the German Patent Office. Applicants believe that U.S. Patent No. 3,893,761 relates to the same subject matter as the cited German reference since each of these references claims priority to U.S. Application Serial No. 303,168, filed Nov. 2, 1972.

Claims 26, 28-30, 35, 36, and 38 were rejected under 35 USC 102(b) as being anticipated by Baxter et al. (U.S. Patent No. 5,112,717). Claims 31-34, 37, 39, and 40-46 were rejected under 35 USC 103(a) as being unpatentable over Baxter et al. in view of Rimai et al. (U.S. Patent No. 4,927,727).

All pending claims are herein canceled and new claims 51-70 are entered. No new matter is entered. Applicants believe that the new claims make the rejections of the April 30, 2004 Office Action moot. However, responses to certain of the points made in the April 30, 2004 Office Action are addressed here because claims 51-70 include certain of the same claim elements as the previously rejected claims.

Claim 52 requires that "only the surface of the molded material [be] heated to the material reactive state." In response to Applicant's argument that Baxter et al. does not disclose that only the surface be heated to the material reactive state, the Examiner has referred Applicants to Col. 4, lines 19+ of Baxter et al. to apparently assert that Baxter et al. discloses that only the surface be heated to the material reactive state. The quote provided by the Examiner states:

> Other known heating devices could be used, for example an infrared heating device on the upper side of receiving sheet 1 which directly heats (thermoplastic) layer 9. (emphasis removed).

The Examiner further suggests that Applicants "cannot advantageously pick and choose sections of the patent for argument but rather must consider the entire teachings. Applicants appreciate such advice and point to the following passages which represent Baxter et al.'s entire teaching with respect to the heating of the thermoplastic layer:

Abstract:	"A toner bearing thermoplastic layer on a receiving sheet is textured or the gloss is improved by heating the thermoplastic layer from the rear to its glass transition temperature..."
Column 2, lines 34-38 :	"...heating said pressure member contacting the side of the sheet opposite said thermoplastic layer to a temperature sufficient to raise or maintain said thermoplastic layer to or above its glass transition temperature..."
Column 2, lines 56-58:	"...the outer molecules of the thermoplastic layer do not reach a temperature substantially higher than the rest of the layer."
Column 3, lines 45-46:	"...transfer roller 27 is heated by a lamp 7 which heats the thermoplastic layer 9 to its glass transition temperature..."
Column 4, lines 13-21:	"...receiving sheet 1 is heated by preheating device 140 sufficiently to soften or to approach softening thermoplastic layer 9 on paper support 10. Preheating device 140 is shown as an ordinary conduction heating device which heats thermoplastic layer 9 through paper support 10. Other known heating devices could be used, for example, an infrared heating device on the upper side of receiving sheet 1 which directly heats layer 9."
Column 4, lines 33-34:	"With layer 9 softened by heat, the toner is pushed into it, totally embedding itself in layer 9."
Column 7, lines 36-40:	"The surface of roller 158 is heated to a temperature sufficient to heat layer 9 through support 10 and curl preventing layer 8 to again raise the temperature of thermoplastic layer 9 to its glass transition temperature or higher."
Column 7, lines 52-57:	"With the heating being accomplished by roller 158 through the support 10 all of thermoplastic layer 9 can be heated above its glass transition temperature without locally overheating the portion of the thermoplastic layer which contacts roller 157."
Column 8, lines 14-20:	"...receiving sheet 1 can be preheated by a preheating device (not shown) similar to device 140. However, if receiving sheet 1 cools down only slightly below its glass transition temperature before it separates from web 142 it can be easily heated above its glass transition temperature by roller 158 without a preheating device..."

Applicants point out that, while Baxter et al. explicitly states in the quoted passages above that (1) thermoplastic layer 9 is heated to its glass transition temperature and (2) the outer molecules of the thermoplastic layer do not reach a temperature substantially higher than the rest of the layer, Baxter et al. includes no disclosure concerning bringing "only the surface portion of the thermoplastic material" into a material reactive state. If the Examiner disagrees and again asserts that Baxter et al. discloses "only the surface portion of the molded material is heated to the material reactive state", Applicants request that such disclosure be specifically identified so that Applicants can address the matter fully on appeal.

Regarding Figure 2, Applicants have previously stated that Figure 2 shows that photoelectric drum 20 is only able to press toner as deep into the outer layers of thermoplastic layer 9 as possible without penetrating thermoplastic layer itself, i.e, the penetration of the layer equals the height of the column of toner such that a sufficiently tall column could penetrate the entire layer.

For example, a hammer can drive a 6-inch pole into softened mud to a depth of 6 inches without the hammer penetrating the surface of the mud. Likewise, a 9-inch pole can be driven to a depth of 9 inches. Two points are made with this analogy. First, the fact that the 6-inch pole does not penetrate deeper than 6 inches does not prove, or even suggest, that the mud which is deeper than 6 inches from the surface is not also softened. Second, the fact that the 6-inch pole penetrates to 6 inches shows that the mud between the surface and the 6-inch depth is softened. Figure 2 shows toner particles which are pushed into the thermoplastic layer to a depth of about 50% of the thermoplastic layer's thickness showing that at least 50% of the thermoplastic layer is softened and disclosing nothing about the remaining 50%. Therefore, Figure 2 provides no basis for concluding that Baxter at al. discloses heating "only the surface portion of the molded material" to a material reactive state.

Therefore, Applicant believes that all rejections have been traversed by amendment and argument and all claims are in proper form for allowance. Early favorable action is earnestly solicited. The Examiner is invited to call the undersigned attorney if that would be helpful in facilitating resolution of any issues which might remain.

Please debit Deposit Account 10-0270 for the necessary fees associated herewith.

Respectfully submitted,

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